

Submission on Intellectual Property issues in the FTA

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I would like to address some of the claims that open source activists and other copyright opponents made in hearings before the two Committees.

In general terms, I see harmonisation with Western copyright regimes as being important in building Australia's creative industries. I disagree with the general concerns expressed about this aspect of the FTA, especially with respect to the alleged open source industry. Open source is actually an anti-industry, and protecting it is not in Australia's interests.

I am a research software engineer, copyright owner and policy researcher. I have a strong interest in the success of Australian creative industries, particularly software. I have studied and worked in those industries for 20 years, and personally developed several valuable software technologies.

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1. Copyright term extensions are fine

Australian opponents of copyright term extensions represent them as a battle between nations, in which Australia as a net user of copyrighted materials will suffer. In support of this view they quote the Ergas Report, and also the arguments of the 17 eminent economists who famously contributed to the Eldred case. (Akerlof, 2002)

However the copyright battle is not really between nations, but between creators and freeloaders in all nations. Australians are not dumb consumers in these markets. In software, modern games and film special effects, markets have been global since the early 1990's, and Australians have been competing and succeeding. Those industries gain from stronger IP protection and IP industries are important for future economic wealth. Accordingly, I think the gains from harmonising with other Western nations outweigh concerns such as those advanced by Ergas.

It's worth bearing in mind that Ergas was assessing term extensions in their own right, rather than as part of an international agreement like the FTA. Also, Ergas (2002: 5) was strongly in favour of copyright as a mechanism for fostering competition. For example, he writes:

An effective system to define and enforce intellectual property rights is critical for this type of dynamic competition to occur on a material scale. The creation of intellectual property involves intellectual effort and can entail substantial resource outlays. Private producers will not have an incentive to make these outlays unless they receive an appropriate return.

Put slightly differently, without a system of intellectual property rights it is difficult to prevent free riding by those who did not contribute to the original investment.

Creators could therefore find it difficult to recoup the cost of their investment, let alone its economic value. Under these circumstances, economic incentives for intellectual property investment would likely be deficient, leading to under-investment in creative effort. To varying extents and in varying ways, the intellectual property laws help redress this problem, and hence make possible investment in, and rivalry through, innovation.

In practical terms too, the nature of the copyright imbalance is not overwhelming. In 2002 - 03, Australia paid royalties and licence fees of \$1.82 billion to the rest of the world, while receiving royalties and licence fees of \$618 million, according to ABS figures cited in a report prepared for the Australian Parliamentary Library. The reasons for that imbalance go much deeper than copyright legislation. (ABS, 2003)

More importantly, the part actually affected by the proposed term extensions is almost infinitesimal, being only 4.5 pages in every 10,000 copied at universities, for example, according to the Copyright Agency Limited, which is in a position to make such determinations. The additional cost per student is less than one cent per year. (Copyright Agency, 2004)

The arguments of the 17 famous economists have received a respectful response from Stan Liebowitz of the University of Texas and Stephen Margolis of North Carolina State University. They contend that, although the present value of future term extensions might be small, it might also represent a cross-over point for writers and other creators on marginal incomes, thus encouraging the creation of more works.

Second, they point out that publishing, movies and computer games are businesses that depend on occasional hits. High revenue streams from occasional hits subsidise a large range of additional titles. For example, the 124 best selling books in 1987 generated \$1 billion of total \$1.7 billion sales for that year, according to research by Liebowitz. In this context, the additional revenue from term extensions might be an essential part of the publishing process, rather than the superfluous profits that extension critics claim. (Liebowitz & Margolis, 2004: 13)

The arguments of the 17 economists also appear in and have been popularised by Lessig's work, including his latest book, *Free Culture*. Lessig's claim in respect of Disney has been addressed by Stephen Manes (2004), writing in *Forbes* magazine, who points out that Disney did not simply appropriate earlier work, but paid the copyright owners for it. Lessig has acknowledged this criticism, albeit without grace.

Liebowitz and Margolis (2004: 5) also identify a problem in the claim of free culturists that greater distribution causes no harm to the creator. There are certain works where it does. People value uniqueness and variety, which is why expensive cars preserve their premium prices even though there are cheaper alternatives, and why art works are sometimes given unique serial numbers. Further, some derivative works can damage the original. Therefore, they conclude, IP plays an important role of stewardship.

In any case, Lessig's argument is dubious on the grounds that the creating of software, movies or books does not preclude others from using the same environment and world for deriving their innovation. An obvious exemption is documentaries, but if they choose to base themselves on

others' work, it is entirely appropriate that they acknowledge the work of the original author or film-maker.

Similarly, I disagree with AIMIA's contention that stronger copyright will somehow harm Australian game developers. Original developers benefit from stronger copyright. AIMIA does not actually represent game developers.

Library groups also raise the problem of needing to obtain permission from copyright owners before digitising large collections of older material. However digitising material has significant consequences, since it facilitates greatly expanded distribution that might undermine the copyright owners' interest in that material. Accordingly, it is entirely appropriate that proper permission needs to be obtained from copyright owners.

2. DMCA has legitimate role

Provisions of the DMCA can seem draconian but they have a legitimate role, if we accept that copyright is worth protecting. Copyright opponents are often guilty of selective presentation when discussing the DMCA. The need for backup copies is one example, and the other is the arrest of the Russian programmer Dmitry Sklyarov, which I return to later.

Lessig argues that the ease of illegal copying militates against treating it as a crime, but this is not consistent with other areas of law. For example, we don't decriminalise murder just because handguns make murder easy.

Similarly, open sourcer Mr Russell attempts to justify the deliberate breaking of copyright protections on the grounds that prevention means restraining a programmer from operating his own software. (Hansard, 2004a: 50) This is a weak argument. Ownership of a tool used to carry out a crime does not excuse the crime. For example, ownership of a screwdriver does not excuse the picking of locks.

2.1 Sklyarov case not what it seems

Copyright opponents represent Sklyarov as an innocent programmer who had simply created software to let blind people hear electronic books published in Adobe's e-book format. (Hansard, 2004a: 52)

The reality is rather different. Sklyarov's program destroyed the IP protections of Adobe electronic books, which publishers had been relying on as a way to safely provide their work on the internet. It was not some innocent program to help the blind. Sklyarov's employer, ElcomSoft, had been selling the program for profit and had ignored letters from Adobe asking it to refrain. It was in that context that the US government arrested Sklyarov when he travelled to the US. (Adobe, 2004)

2.3 Take-down provisions

We would not want take-down provisions used to censor material, as has occurred in the US. However they are a useful way that copyright owners can quickly enforce their rights. To require copyright owners to take court action, as proposed by the EFA's Coroneos, imposes excessive burdens on copyright owners. Balance is not simply a matter of considering the inconvenience caused to ISP's.

2.4 Need for inter-operability and error correction is overstated

The alleged need to circumvent protection devices to make programs inter-operable or to correct errors is generally overstated for ideological reasons, and also as part of competitive marketing strategies by multinational competitors of Microsoft.

The reality is that popular software products are forced by the market to be able to read and operate with other popular data formats. For example, businesses with old Word Perfect or Lotus files can continue to read them with Microsoft Word. Old Word files can be read with free viewers provided by Microsoft, if organisations decide not to buy Microsoft products.

For technical or important data, continued access is a matter of professional data management, rather than practices of software providers. Such data is normally stored in SQL databases or in formats accessible to numerous applications and custom programs. Similar trends exist in specialised fields such as GIS, where data formats tend to converge towards the most useful industry formats, which are then supported by all popular software products. Accordingly, I argue that the market, and professional management, address the issue of data being compatible, and it is addressed well enough not to require exceptions to copyright protections.

2.5 Legitimate reasons to hinder interoperability

There are also some strong reasons why software developers need to stop unauthorised people from interrogating connection protocols. In the case of online games, developers face an increasing need to stop cheating, which requires them to lock casual users out of the protocol stream.

3. Patents

Patents for business processes are one area where I believe caution is warranted. In software, there's not really any need for them, and they can allow freeloaders to improperly profit from the work of software developers, just as open source does. This caution does not apply to patents in other technologies.

For software, properly enforced copyright combined with protection of source code suffices to prevent theft and enable healthy competition. Note that open source does not have this simple protection available to it.

The respectable literature on patents reaches no definite conclusions as to whether software patents are good or bad. An illustrative example of the debate can be seen in dialogue surrounding the paper by James Bessen and Robert Hunt (2004a), *An Empirical Look at Software Patents*. Robert Hahn and Scott Wallsend (2003) responded that Bessen's identification of software patents was flawed, thus undermining his claims that such patents retard innovation. Bessen and Hunt (2004b) defended the selection but concurred with some criticisms.

Another significant paper that casts doubt on the value of patents in fostering innovation is a study of the semiconductor industry from 1979 to 1995, by Bronwyn Hall and Rosemarie Ziedonis (2001: 125). They report that:

...firms amass vast patent portfolios simply as "bargaining chips," leading to "patent portfolio races." ... If patent rights were strictly awarded to inventors of "nonobvious," "useful," and "novel" inventions, then it should become increasingly difficult to obtain a patent when a thicket of prior art exists, and the number of successful patent applications should fall. This is not, however, what we observe in this industry.

Nevertheless, several studies also report that patents have significant benefits for small firms and new entrants, directly contradicting the claims of patent opponents. This has particular relevance for Australia. For example, Ronald Mann (2004: iii) of the University of Texas explicitly describes the alleged patent thicket as a myth. He writes:

This part explores several benefits, including the classic benefit of excluding competitors. In this industry at least, that benefit accrues primarily to small firms, protecting them from the competitive depredations of incumbents. Incumbents, by contrast, rarely use patents to exclude smaller firms from the industry. The part also discusses a series of less conventional benefits small firms gain from software patents: as barter in cross-licensing arrangements, in signaling their technical competence to third parties, in converting tacit knowledge into a verifiable and transferable form, and in making the firm attractive to potential acquirers.

Hall and Ziedonis (2001) make the same point:

... stronger patent rights may have facilitated entry by specialized firms and contributed to vertical disintegration in this industry.

The OECD (2004: 6) points out that only about 10 percent of software patents are granted to software companies, with the rest being to other types of business. Thus any special treatment of software patents could harm much broader sections of business. Mann (2004) makes this point too, writing:

Because there is considerable ambiguity about exactly what a software patent is – they do not fall into any specific PTO class – and because many patents in the classes that indisputably do constitute software patents are held outside the industry, that work says little or nothing about the software industry itself. As I suggested above, software is unusual among patentable goods in its interaction with all sectors of the economy. Thus, there are some software features in a wide variety of otherwise unrelated products.

4. Open source activists don't represent the Australian software industry

The software industry generally means firms that develop software and charge for it. This includes games developers and film special effects creators. Examples in Australia include Mincom, Ratbag and Animal Logic. These are high value firms that create valuable IP, jobs and export dollars. A necessary corollary of this is that those companies protect the source code that embodies their investments of work and expertise.

By comparison, open source firms are generally either commodity firms that perform relatively low-skill installation and support of computers and programs, or large multinationals such as IBM. Open source advocate Mr Russell, who appeared before the committee (Hansard, 2004a: 49), is actually an IBM employee. I discuss the nature of open source interest groups in a later section.

In the 20 April 2004 hearings before the Joint Standing Committee on Treaties, open source activists Mr Zymaris and Mr D'Aprano spoke of the alleged threat the FTA posed to open source, representing it as a threat to the Australian software industry, which is not the case. Mr Wilkie, Mr Adams and Senator Marshall tried to clarify this with the following series of questions:

Mr Wilkie: Given that the IT industry is going to be so important for economic development, does the problem that you are faced with have the potential to cripple the industry in Australia, making Australia uncompetitive in the software business?
(Hansard, 2004b: 82)

Mr Adams: Would you say that hundreds of companies like yours, which could be affected by these changes, really did not have an input into this agreement?
(Hansard, 2004b: 87)

Senator Marshall: I want to understand the size of the industry you are talking about. ... Did you say that there are hundreds of other companies in your realm? ... If the worst case scenario that you have painted here comes to fruition, what impact will it have on you? ... Would it stop you dead in your tracks or would there be a slow decline? (Hansard, 2004b: 88)

Mr Zymaris's answers to these questions were not dishonest, but they avoided the important issues. Most Australian software firms are indeed small, as Mr Zymaris points out, but it's not true that they all support open source, nor that they fear the DMCA. Most members of the recently formed Open Source Industry Association are commodity firms and include booksellers, lawyers and casual consultants.

A similar misunderstanding went uncorrected in the hearings of 17 May 2004 before the Senate Select Committee, when the Chair, Senator Cook, asked open source activist Mr Scott whether he was representing the Australian software industry.

Mr Scott, what I took you to say in your initial remarks—and maybe I took it wrongly, so you can correct me—is that you are in effect talking on behalf of the Australian software industry and their views. (Hansard, 2004a: 23)

The honest answer to this question would have been “No,” but Scott instead said he was talking for the open source movement. When Senator Cook mistakenly interpreted that as a “Yes” and asked Scott questions about the likely impact on the Australian software industry, Scott answered in terms of open source rather than Australian industry.

Mr Scott—Open source. I am not here in an official capacity as an agent for them, but it is what I have gleaned from talking to people in the industry.

CHAIR—Are you putting to us that in some way, if this agreement were to go through, by limiting access to copyrighted material it would act as a barrier to the development of the software industry in Australia?

Mr Scott—Potentially, of the open source software industry in Australia, yes.

CHAIR—Potentially.

Mr Scott—And I guess, actually, it is not limited to the open source software industry. What I am saying is that these provisions could be used as a barrier to the development of the industry, but to be effective they would have to be used by an incumbent. (Hansard, 2004a: 23)

5. Open sourcers do not really support copyright

Open source activists nowadays stress that they love and support copyright. Technically they are correct; they use copyright to force restrictions on downstream users.

In practice the movement is an undermining of copyright. Open source uses copyright to strip the benefit from the creator, rejecting the original intent of copyright. It relies on the original drafters of copyright never imagining that beneficiaries of copyright would use it to deny benefits to themselves. This is particularly so with the notorious GPL.

Open sourcers phrase their philosophy as bestowing freedoms on users, but it also removes them. For example, Mr Zymaris describes it like this:

Your extensions to it have to be fed back into the same pool. I am using my IP to hook you in and get your IP. (Hansard, 2004b: 79)

Problems arise where government funded research is released under licences like the GPL. That work is available to everyone, but the best developers are barred from commercialising it. In this sense, licencing regimes such as the GPL hinder further innovation rather than advancing it.

The ideology behind open source can be seen in reactions of the open source movement to moves by the German government in 2002 to amend copyright legislation so that creators would be protected from exploitation by publishers or re-sellers. The legislation prevented creators from waiving or being coerced into waiving their right to adequate compensation for use of their works. Open source lobbyists insisted on an exemption for open source, so that open source developers could continue to be exploited. (Hahn, 2002: 5)

6. Google demonstrates the success of the commercial software model

In hearings of 17 May 2004, Linux advocate Mr Russell adduced Google as an example of open source, based on the fact that the company runs its software on Linux. (Hansard, 2004a: 57)

This is misleading. Google's preeminence arises from the power and sophistication of its search and matching technology, which performs 200 million searches each day, finding matches in a 20 terabyte data stack. That powerful search and matching technology is closely guarded, and certainly not "released to the community" as open sourcers advocate. The fact that the software runs on Linux is little more important than which brand of computer it runs on.

Google is thus a good example of the merits of the commercial model for software, not open source. Google's guarding of its intellectual property is part of the reason the company is valued at A \$50 billion.

7. Why open source is bad for Australia

Open source activism quotes many different circumstances in support of the concept but, fundamentally, the activism is about one thing – gaining government assistance to compete against successful commercial software developers for the lucrative 600 million computer mass market. Linux has only about 1 percent of that mass market, according to access logs for search site Google. (Google, 2003)

Although political supporters of open source think they're attacking evil multinationals, open source is now part of a \$1 billion operation by IBM and others who are using it to undermine Microsoft in lucrative government accounts. IBM's true motives are revealed in the fact that, while it promotes open source in Microsoft markets, it keeps its own expensive software products proprietary in other markets that it owns. These include its expensive WebSphere application server and AIX Unix operating system. (Lyons, 2004)

Computer sellers such as HP and Sun use open source as a way to depress software prices and thus expand the markets for their expensive computers.

Australia and Australians will not win from these battles. Our future lies in software and IP rather than making computers, and so our interests are actually the opposite of those advocated by the open source movement. The end game of open source would be a nation of low-skill box installers without any valuable IP, competing against multinational outsourcers on price alone.

Many of the contexts that open source activism cite as support for its cause are not really relevant. For example, scientists and academics share source code because it's not central to

their jobs or work. That type of software is technical and rough. It's quite different from the highly engineered products that business and home users demand.

Technical users and server administrators install and use public software because sometimes it does the job well, as with the Apache server and, in other cases, it's easy for them to work around the limitations. Again, that is a different from the mass market for consumers and business users.

Similarly, there are vast amounts of source code available to students and professionals for learning. There is no need to demand that successful software developers disclose their technology simply to facilitate training. It's a foolish demand, and it's inconsistent. There are no demands for Intel and other chip makers to provide the diagrams for their circuits, or for car makers to provide the engineering drawings for their cars.

I discuss these issues further in a paper for the US public policy research institution, the Institute for Policy Innovation. (Healy, 2004)

There are two different meanings to open source, although open source activism refrains from distinguishing between them. One is for people and government to use public software such as Linux in preference to commercial software. This doesn't directly effect the Australian software industry one way or the other, although Linux is a less polished platform for commercial developers to target, and widespread usage would probably reduce the amount of third party software development. This directly contradicts the claims and beliefs of political backers of open source.

The second meaning is that commercial firms, including successful Australian firms, should disclose their technology to rivals by exposing their source code. This would kill those companies. In this sense, open source is really an anti-industry, and one of its consequences would be increased dependence on government and university funding for software, which would effectively represent a subsidy to big business.

8. Conclusions

Australia is a well educated, capable and creative nation. To compete in the world economy we need strong copyright protections so our smaller firms can protect their innovation against the larger marketing and distribution engines of multinationals. Accordingly, the IP provisions of the FTA do no harm to us, and will be in our interests.

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